

IN THE CLAIMS

Add claims 11-16 as follows:

11. A method for the preparation of hyperpolymeric hemoglobins with uniform molar masses from solutions containing cross-linked hyperpolymeric hemoglobin molecules with sizes which are up to (5-10) x 100 times of the size of (quaternary structured) native hemoglobin molecules, comprising the steps of:

- performing a fractional precipitation of the solution by adding a precipitation reagent;
- performing a preparative chromatographical fractionation by using gel-permeation chromatography;
- performing a fractionation by partial dissolution of a precipitate of hemoglobin hyperpolymers; or
- performing at least one of the steps above or any combination of them.

12. The method according to claim 11, comprising hemoglobin hyperpolymers synthesized by using bifunctional cross-linking agents.

13. The method according to claim 11, where the cross-linkers used are glutaraldehyde or 2,5-diisothiocyanatobenzene sulfonate.

14. The method according to claim 11, wherein the fractionl precipitation is performed by adding ammonium sulphate ($(\text{NH}_4)_2\text{SO}_4$) to a concentrated hemoglobin hyperpolymers solution and a reaction time of at least 30 Minutes.

15. The method according to claim 11, wherein the chromatographic fractionation is performed with Sephadex S-400 HR gel and the solvent used has the composition:

NaCl 144 mmol/L

HEPES buffer 10 mmol/L

NaN₃ 100 mg/L

16. The method according to claim 11, wherein the electrolyte used as the solvent for fractionation by partial dissolution has the composition: